

PRESS RELEASE

**Denison Completes US\$55 Million Offering
to Fund Long-Lead Procurement for Phoenix ISR Project**

Toronto, ON – October 16, 2023. Denison Mines Corp. (“Denison” or the “Company”) (DML: TSX, DNN: NYSE American) is pleased to announce that today it has closed the previously announced bought deal public offering of common shares (the “Offering”), resulting in the issuance of 37 million shares, at a price of US\$1.49 per share, for total gross proceeds of US\$55.13 million.

The Offering was completed through a syndicate of underwriters led by Cantor Fitzgerald Canada Corporation, as sole bookrunner and lead underwriter, together with Canaccord Genuity Corp., Haywood Securities Inc., Raymond James Ltd., BMO Nesbitt Burns Inc., Scotia Capital Inc., Cormark Securities Inc. and SCP Resource Finance LP pursuant to an underwriting agreement between Denison and the underwriters dated October 11, 2023.

Denison intends to use the net proceeds from the Offering to fund (1) the advancement of the proposed Phoenix in-situ recovery uranium mining operation (the “Phoenix Project”) through the procurement of long lead items (including associated engineering, testing and design) identified during the ongoing Front End Engineering Design process and the Phoenix Feasibility Study; (2) exploration and evaluation expenditures; and (3) general corporate and administrative expenses, including those in support of corporate development activities, and working capital requirements.

Based upon preliminary budgets and plans, Denison expects the funds, taken together with existing financial resources including those from prior prospectus financings, will be sufficient to advance the Phoenix Project to a final investment decision and into the project execution phase. Denison further expects to be able to fund operations during this period while maintaining a large portion of its current physical uranium holdings, which are planned to be utilized in the future in connection with financing the continued advancement and/or construction of the Phoenix Project.

The Common Shares were qualified for issuance pursuant to a prospectus supplement (the “Prospectus Supplement”) to the Company’s existing Canadian short form base shelf prospectus (the “Base Shelf Prospectus”) and U.S. registration statement on Form F-10, as amended (File No. 333-258939) (the “Registration Statement”), each dated September 16, 2021. The Registration Statement was declared effective by the United States Securities and Exchange Commission (the “SEC”) on September 17, 2021. The Prospectus Supplement has been filed with the securities commissions in each of the provinces and territories of Canada, except Quebec, and with the SEC. The Canadian Prospectus Supplement is available on the SEDAR+ website maintained by the Canadian Securities Administrators at www.sedarplus.ca. The U.S. Prospectus Supplement (together with the related U.S. Base Shelf Prospectus) is available on the SEC’s website at www.sec.gov. Alternatively, the Prospectus Supplement may be obtained upon request by contacting the Company or Cantor Fitzgerald Canada Corporation in Canada, attention: Equity Capital Markets, 181 University Avenue, Suite 1500, Toronto, ON, M5H 3M7, email: ecmcanada@cantor.com or Cantor Fitzgerald & Co., Attention: Equity Capital Markets, 499 Park Avenue, 6th Floor, New York, New York, 10022 or by email at prospectus@cantor.com.

This press release does not constitute an offer to sell or the solicitation of an offer to buy securities, nor will there be any sale of the securities in any jurisdiction in which such offer, solicitation or sale would be unlawful prior to the registration or qualification under the securities laws of any such jurisdiction. The securities being offered have not been approved or disapproved by any regulatory authority, nor has any such authority passed upon by the accuracy or adequacy of the Prospectus Supplement, the Base Shelf Prospectus or the Registration Statement.

About Wheeler River

Wheeler River is the largest undeveloped uranium project in the infrastructure-rich eastern portion of the Athabasca Basin region, in northern Saskatchewan. The project is host to the high-grade Phoenix and Gryphon uranium deposits, discovered by Denison in 2008 and 2014, respectively, and is a joint venture between Denison (90% and operator) and JCU (Canada) Exploration Company Limited (10%). In August 2023, Denison filed a technical report summarizing the results of (i) the feasibility study completed for In-Situ Recovery ("ISR") mining of the high-grade Phoenix uranium deposit and (ii) a cost update to the 2018 Pre-Feasibility Study for conventional underground mining of the basement-hosted Gryphon uranium deposit. Based on the respective studies, both deposits have the potential to be competitive with the lowest cost uranium mining operations in the world. Permitting efforts for the planned Phoenix ISR operation commenced in 2019 and have advanced significantly, with licensing in progress and a draft Environmental Impact Statement submitted for regulatory and public review in October 2022. More information is available in the technical report titled "NI 43-101 Technical Report on the Wheeler River Project Athabasca Basin, Saskatchewan, Canada" dated August 8, 2023 with an effective date of June 23, 2023, a copy of which is available on Denison's website and under its profile on SEDAR+ at www.sedarplus.ca and on EDGAR at www.sec.gov.

About Denison

Denison is a uranium exploration and development company with interests focused in the Athabasca Basin region of northern Saskatchewan, Canada. In addition to the Company's effective 95% interest in its flagship Wheeler River Uranium Project, Denison's interests in Saskatchewan include a 22.5% ownership interest in the McClean Lake Joint Venture, which comprises several uranium deposits and the McClean Lake uranium mill that is contracted to process the ore from the Cigar Lake mine under a toll milling agreement, plus a 25.17% interest in the Midwest Main and Midwest A deposits and a 67.41% interest in the Tthe Heldeth T  e ("THT") and Huskie deposits on the Waterbury Lake property. The Midwest Main, Midwest A, THT and Huskie deposits are located within 20 kilometres of the McClean Lake mill.

Through its 50% ownership of JCU, Denison holds additional interests in various uranium project joint ventures in Canada, including the Millennium project (JCU, 30.099%), the Kiggavik project (JCU, 33.8118%) and Christie Lake (JCU, 34.4508%).

Denison's exploration portfolio includes further interests in properties covering ~285,000 hectares in the Athabasca Basin region.

For more information, please contact

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Cautionary Statement Regarding Forward-Looking Statements

Certain information contained in this news release constitutes 'forward-looking information', within the meaning of the applicable United States and Canadian legislation concerning the business, operations and financial performance and condition of Denison. Generally, these forward-looking statements can be identified by the use of forward-looking terminology such as 'plans', 'expects', 'budget', 'scheduled', 'estimates', 'forecasts', 'intends', 'anticipates', or 'believes', or the negatives and/or variations of such words and phrases, or state that certain actions, events or results 'may', 'could', 'would', 'might' or 'will be taken', 'occur', 'be achieved' or 'has the potential to'.

In particular, this news release contains forward-looking information pertaining to: the use of proceeds from sales from the Offering, including expectations with respect to the advancement of the Phoenix Project and an investment decision on the Phoenix Project; and Denison's expectations regarding its joint venture ownership interests and the continuity of its agreements with third parties.

Forward looking statements are based on the opinions and estimates of management as of the date such statements are made, and they are subject to known and unknown risks, uncertainties and other factors that may cause the actual results, level of activity, performance or achievements of Denison to be materially different from those expressed or implied by such forward-looking statements. For example, Denison may decide or otherwise be required to suspend its evaluation or other project activities if it is unable to maintain or otherwise secure the necessary approvals or resources (such as testing facilities, capital funding, etc.), which could have a material impact on the Company's intended use of proceeds of the Offering and other objectives stated in this press release. Denison believes that the expectations reflected in this forward-looking information are reasonable and no assurance can be given that these expectations will prove to be accurate and results may differ materially from those anticipated in this forward-looking information. For a discussion in

respect of risks and other factors that could influence forward-looking events, please refer to the factors discussed in Denison's Annual Information Form dated March 27, 2023 under the heading "Risk Factors". These factors are not, and should not be construed as being exhaustive.

Accordingly, readers should not place undue reliance on forward-looking statements. The forward-looking information contained in this news release is expressly qualified by this cautionary statement. Any forward-looking information and the assumptions made with respect thereto speaks only as of the date of this news release. Denison does not undertake any obligation to publicly update or revise any forward-looking information after the date of this news release to conform such information to actual results or to changes in Denison's expectations except as otherwise required by applicable legislation.